

CLPTO

11.29/03

SM

Cancel Claim 1

- 2 (currently amended): The device of claim ~~22~~, 1 wherein the surface defines at least a portion of a microwave resonant cavity.
- 3 (currently amended): The device of claim ~~22~~, 1, wherein the thickness of the metal fitting is greater than 10 μm .
- 4 (currently amended): The device of claim ~~22~~, 1 wherein the surface defines at least a portion of a microwave reflector.
- 5 (currently amended): The device of claim ~~22~~, 1 wherein the substrate comprises an insulator.
- 6 (currently amended): The device of claim ~~22~~, 1 wherein the thickness of the metal fitting is less than 500 μm .
- 7 (currently amended): The device of claim ~~6~~, 5 wherein the thickness of the metal fitting is less than 100 μm .
- 8 (currently amended): ~~The device of claim 1 wherein the substrate~~ A device for manipulating microwave radiation, comprising:
a mechanically stable substrate that defines the shape of a surface for reflecting microwave radiation, and has a coefficient of thermal expansion less than $5 \times 10^{-6}/^{\circ}\text{C}$; and
a metal fitting conforming to the defined shape, and providing the surface that reflects microwave radiation, wherein the metal fitting has a thickness that is insufficient for independent mechanical stability.
- 9 (currently amended): ~~The device of claim 1 wherein the metal fitting~~ A device for manipulating microwave radiation, comprising:

a mechanically stable substrate that defines the shape of a surface for reflecting microwave radiation; and

a metal fitting conforming to the defined shape, and providing the surface that reflects microwave radiation, wherein the metal fitting has a thickness that is insufficient for independent mechanical stability and has a coefficient of thermal expansion greater than $10 \times 10^{-6}/^{\circ}\text{C}$.

- 10 (currently amended): The device of claim 22, \pm further comprising a braze joint that bonds the metal fitting to the substrate.
- 11 (currently amended): The device of claim 22, \pm wherein the metal fitting comprises silver.
- 12 (currently amended): The device of claim 22, \pm wherein the metal fitting comprises a wrought metal.
- 13 (currently amended): The device of claim 22, \pm wherein the metal fitting consists of a metal that is at least 99% pure.
- 14 (currently amended): The device of claim 22, \pm wherein the metal fitting is bonded to the substrate via an interference fit.
- 15 (currently amended): The device of claim 22, \pm wherein the metal fitting has a machined surface.
- 16 (currently amended): The device of claim 22, \pm wherein the metal fitting completely shields the substrate from exposure to the microwave radiation.
- 17 (currently amended): The device of claim 22, \pm further comprising an adhesive layer between the substrate and the metal fitting.
- 18 (original): The device of claim 17, wherein the adhesive layer has a thickness of less than $1.0 \mu\text{m}$.
- 19 (currently amended): The device of claim 22, \pm , wherein the metal fitting has a ring shape having an inner diameter and an outer diameter.
- 20 (original): The device of claim 19, wherein the inner diameter is machined to

match an outer diameter of the substrate.

21 (original): The device of claim 19, wherein the outer diameter is machined to match an inner diameter of the substrate.

22 (currently amended): ~~The device of claim 1;~~ A device for manipulating microwave radiation, comprising:

a mechanically stable substrate that defines the shape of a surface for reflecting microwave radiation; and

a metal fitting conforming to the defined shape, and providing the surface that reflects microwave radiation, wherein the metal fitting has a thickness that is insufficient for independent mechanical stability,

wherein the substrate and the metal fitting have a compatible thermal behavior.

Cancel Claims 23-39